Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (currently amended): A projector comprising:

a housing;

an image module installed within the housing for projecting an image toward a screen at the front side of the projector;

a detecting module for detecting distances from the projector to the front side of the indoor space the projector is to project within and from the projector to the back side of the ~~projector~~ indoor space; and

a processor connected with the detecting module for adjusting the luminance of the projecting image projected by the image module based on the distances from the projector to the front and back sides of the indoor space ~~side of the projector, and from the projector to the back side of the projector~~.

2 (currently amended): The projector of claim 1, wherein the detecting module comprises:

a transmitter for emitting detecting signals toward the front side of the projector and the back side of the projector;

a receiver for receiving the reflected detecting signals reflected from the front side of the projector and the back side of the projector; and

a decision module for determining the distances from the projector to the front side of the indoor space ~~projector~~, and from the projector to the back side of the indoor space ~~projector based on the detecting signals emitted by the transmitter~~.

3 (currently amended): The projector of claim 1, wherein the detecting module comprises:

a transmitter for emitting a beam toward the front side of the projector and the back side of the projector;

an image-taking module for taking analog images projected by the beams to the front side of the projector and the back side of the projector;

an analog-to-digital converter for transforming the taken analog image by the image-taking module into a digital image;

a comparison module for comparing gray level of each pixel of the digital image; and

a decision module for determining the distances from the projector to the front side of the indoor space ~~projector~~, and from the projector to the back side of the indoor space ~~projector, based on the position of the pixel with highest gray level~~.

4 (original): The projector of claim 3, wherein the beam is a laser beam.

5 (currently amended): The projector of claim 2, wherein the processor adjusts the luminance of the image projected by the image module based on the total distances from the projector to the front and back sides of the indoor space ~~side of the projector, and from the projector to the back side of the projector~~.

6 (currently amended): The projector of claim 2, wherein the transmitter further emits detecting signals toward the left and right sides of the projector, and thus the decision module determines the distances from the projector to the left and right sides of the indoor space

~~projector~~ based on the detecting signals to be emitted to the left and right sides of the projector by the transmitter, respectively.

7 (currently amended): The projector of claim 3, wherein the transmitter further emits beams towards toward the left and right sides of the projector, the image-taking module taking analog images projected by the beams to the left and right sides of the projector, the analog-to-digital converter transforming the analog images taken by the image-taking module into a digital image, the comparison module comparing a gray level of each pixel of the digital image, and the decision module determining distances from the projector to the left and right sides of the indoor space ~~projector~~ based on the position of the pixel with highest gray level.

8 (currently amended): The projector of claim 6, wherein the processor determines an ideal distance from the projector to the screen based on a shorter distance between the distances from the projector to the left and right sides of the indoor space ~~left sides of the projector, and from the projector to the right side of the projector~~, the projector further comprising a display device coupled to the processor for outputting a display signal based on a difference between an actual distance from the projector to the screen and the ideal distance from the projector to the screen.

9 (currently amended): The projector of claim 8, wherein the processor determines an ideal distance from the projector to the screen based on the shorter distance between the distances from the projector to the left and right sides of the indoor space ~~side of the projector and~~

~~from the projector to the right side of the projector~~, and a predetermined ratio ~~to~~ of the total distances from the projector to the front side of the indoor space ~~of the projector~~ and from the projector to the back side of the indoor space ~~of the projector~~.

10 (currently amended): The projector of claim 9, wherein if the shorter distance between the distances from the projector to the left and right sides of the indoor space ~~projector and from the projector to the right side of the projector~~ is longer than or equal to the predetermined ratio ~~to~~ of the total distances from the projector to the front side of the indoor space ~~projector~~ and from the projector to the back side of the ~~projector~~ indoor space, the luminance of the image projected by the image module is adjusted based on the total distances from the projector to the front and back sides of the indoor space ~~side of the projector and from the projector to the back side of the projector~~; if the shorter distance between the distances from the projector to the left and right sides of the indoor space ~~side of the projector and from the projector to the right side of the projector~~ is shorter than the predetermined ratio ~~to~~ of the total distances from the projector to the front and back sides of the indoor space ~~side of the projector and from the projector to the back side of the projector~~, the image projected by the image module is adjusted based on the shorter distance between the distances from the projector to the left and right sides of the indoor space ~~side of the projector and from the projector to the right side of the projector~~.

11 (original): The projector of claim 1, wherein the detecting module is rotatable inside the housing for detecting distances from the projector outwards in various directions.

12 (currently amended): A projector comprising:

a housing;

an image module installed within the housing for projecting an image toward a screen at the front side of the projector;

a detecting module for detecting distances from the projector to the front, back, left, and right sides of the indoor space the projector is to project within;

a processor coupled with the detecting module for determining an ideal distance from the projector to the screen based on the distances from the projector to the front, back, left, and right sides of the indoor space ~~projector~~; and

a display device coupled to the processor for outputting a display signal based on the ideal distance from the projector to the screen.

13 (currently amended):The projector of claim 12, wherein the detecting module comprises:

a transmitter for emitting detecting signals toward the front, back, left, and right sides of the projector;

a receiver for receiving the reflected detecting signals from the front, back, left, and right sides of the projector; and

a decision module for determining the distances from the projector to the front, back, left, and right sides of the indoor space ~~projector~~ based on the detecting signals emitted by the transmitter.

14 (currently amended): The projector of claim 12, wherein the detecting module comprises:

a transmitter for emitting a beam toward the front, back, left, and right sides of the projector;

an image-taking module for taking analog images projected by the beams to the front, back, left, and right sides of the projector;

an analog-to-digital converter for transforming the taken analog image by the image-taking module into a digital image;

a comparison module for comparing gray level of each pixel of the digital image; and

a decision module for determining the distances from the projector to the front, back, left, and right sides of the indoor space ~~projector~~, based on the position of the pixel with highest gray level.

15 (original): The projector of claim 14, wherein the beam is a laser beam.

16 (currently amended): The projector of claim 12, wherein the processor determines an ideal distance from the projector to the screen based on a shorter distance between the distances from the projector to the left and right sides of the indoor space ~~projector and from the projector to the right side of the projector~~.

17 (currently amended): The projector of claim 16, wherein the processor determines an ideal distance from the projector to the screen based on the shorter distance between the distances from the projector to the left and right sides of the indoor space ~~side of the projector and~~

~~from the projector to the right side of the projector~~, and a predetermined ratio ~~to~~ of the total distances from the projector to the front side of the indoor space ~~projector~~ and from the projector to the back side of the indoor space ~~projector~~.

18 (currently amended): The projector of claim 16, wherein the processor adjusts the luminance of the image projected by the image module based on the distances from the projector to the front and back sides of the indoor space ~~side of the projector and from the projector to the back side of the projector~~.

19 (currently amended): The projector of claim 18, wherein the processor adjusts the luminance of the image projected by the image module based on the total distances from the projector to the front and back sides of the indoor space ~~side of the projector and from the projector to the back side of the projector~~.

20 (currently amended): The projector of claim 19, wherein if the shorter distance between the distances from the projector to the left and right sides of the indoor space ~~side of the projector and from the projector to the right side of the projector~~ is longer than or equal to the predetermined ratio ~~to~~ of the total distances from the projector to the front side of the indoor space ~~projector~~ and from the projector to the back side of the indoor space ~~projector~~, the luminance of the image projected by the image module is adjusted based on the total distances from the projector to the front and back sides of the indoor space ~~side of the projector and from the projector to the back side of the projector~~; if the shorter distance between the distances

from the projector to the left and right sides of the indoor space ~~side of the projector and from the projector to the right side of the projector~~ is shorter than the predetermined ratio ~~to~~ of the total distances from the projector to the front side of the indoor space ~~projector~~ and from the projector to the back side of the indoor space ~~projector~~, the image projected by the image module is adjusted based on the shorter distance between the distances from the projector to the left and right sides of the indoor space ~~side of the projector and from the projector to the right side of the projector~~.

21 (original): The projector of claim 12, wherein the detecting module is rotatable inside the housing for detecting distances from the projector outwards in various directions.

22 (currently amended): A method for adjusting an ideal projecting distance and projecting luminance of a projector comprising:

(a) detecting distances from the projector to the front, back, left, and right sides of the indoor space the projector is to project within;

(b) comparing the shorter distance between the distances from the projector to the left and right sides of the indoor space ~~side of the projector and from the projector to the right side of the projector~~, and a predetermined ratio ~~to~~ of the total distances from the projector to the front side of the indoor space ~~projector~~ and from the projector to the back side of the ~~projector~~ indoor space; and

(c) determining a projecting parameter, based on the result of step (b).

23 (currently amended): The method of claim 22 further comprising:

(d) controlling the operation of the projector based on the projecting parameter, wherein the projecting parameter indicates a width of an image projected by the projector, an ideal distance from the projector to the front side of the ~~projector~~ indoor space, or luminance of an image projected by the projector.

24 (currently amended): The method of claim 23, wherein the step (c) comprises:

(c1) determining the projecting parameter based on the total distances from the projector to the front and back sides of the indoor space ~~side of the projector and from the projector to the back side of the projector~~, if the shorter distance between the distances from the projector to the left and right sides of the indoor space ~~side of the projector and from the projector to the right side of the projector~~ is longer than or equal to the predetermined ratio ~~to~~ of the total distances from the projector to the front side of the ~~projector~~ indoor space and from the projector to the back side of the ~~projector~~ indoor space; and

(c2) determining the projecting parameter based on the shorter distance between the distances from the projector to the left and right sides of the indoor space ~~side of the projector and from the projector to the right side of the projector~~, if the shorter distance between the distances from the projector to the left and right sides of the front space ~~side of the projector and from the projector to the right side of the projector~~ is shorter than the

predetermined ratio ~~to~~ of the total distances from the projector to the front side of the ~~projector~~ indoor space and from the projector to the back side of the ~~projector~~ indoor space.

5